United States Department of the Interior

FISH AND WILDLIFE SERVICE

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In Reply Refer To
FWS/R6
ES/UT

October 1, 2002

Memorandum

To: Field Manager, Vernal Field Office, Bureau of Land Management, Vernal, Utah

From: Field Supervisor, Utah Field Office, U.S. Fish and Wildlife Service, West Valley City, Utah

Re: Concurrence of Not Likely to Adversely Affect to Eleven Endangered and Threatened Species for the Veritas Seismic Exploration Project in Uintah County, Utah

This memorandum transmits the U.S. Fish and Wildlife Service's (Service) "concurrence of not likely to adversely affect" (Concurrence) for the Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), bonytail (*Gila elegans*), razorback sucker (*Xyrauchen texanus*), Mexican spotted owl (*Strix occidentalis lucida*), bald eagle (*Haliaeetus leucocephalus*), southwestern willow flycatcher (*Empidonax traillii extimus*), Canada lynx (*Lynx canadensis*), clay reed-mustard (*Schoenocrambe argillacea*), shrubby reed-mustard (*Glaucocarpum (= Schoenocrambe) suffrutescens*), and Uinta Basin hookless cactus (*Sclerocactus glaucus*) as a consequence of the proposed 2-D Seismic Exploration by Veritas DGC Land Inc. in the vicinity of the White River in Uintah County, Utah (Veritas project). This memorandum also transmits our Concurrence of no affect for the Ute ladies'-tresses orchid (*Spiranthes diluvialis*) as a consequence of the Veritas project. And, finally our concurrence for conservation measures you propose benefitting the black-footed ferret (*Mustela nigripes*), Mountain plover (*Charadrius montanus*), Graham's beard tongue (*Penstemon grahamii*) and the White River beard tongue (*Penstemon scariosus albifluvis*). All these species are in the zone of potential impacts of the Veritas project. This informal consultation was conducted in accordance with Section 7 of the Endangered Species Act (16 U.S.C. 1531 et seq.) (Act) and the Interagency Cooperation Regulations (50 CFR 402). Your request for formal consultation was received on September 27, 2002. As a result of informal consultation and the fact that the project will not adversely affect any endangered or threatened species, we have concluded that this consultation does not rise to the level of formal consultation as defined by the Act and is implementing regulations.

This Concurrence is based on information provided in the 2-D Seismic Exploration by Veritas DGC Land Inc. biological assessment prepared by your office and the Environmental Assessment for 2-D Seismic Exploration by Veritas DGC Land Inc., Uintah County, Utah (EA No. UT-080-2002-21). Additional information was provided during the consultation process, from Robert Specht, BLM, Vernal Field Office, and from existing Service files. A complete administrative record of this consultation is on file at this office.

Consultation History

A list of Federally listed and Proposed, Threatened, Endangered and Candidate Species was sent to TRC Maria Associates by the Utah Field Office on March 27, 2002. The draft environmental assessment for the project was sent to our office on June 8, 2002. Informal consultation has occurred between the U.S. Bureau of Land Management (BLM) Utah State Office, BLM Vernal Field Office and the Service at several meetings and phone conversations including; a meeting at the Services' office on July 9, 2000; telephone conference on August 28, 2002; meeting with Larry England(U.S. FWS) and Robert Specht(BLM) on plant species habitat review and designations on September 9 and 10, 2002; phone calls on wildlife on September 19, 2002, September 23, 2002, and September 30, 2002. In addition the Service provided input to the BLM and Roger Schoumacher of TRC Mariah Associates in a letter dated September 3, 2002 on the draft Veritas 2-D Seismic Exploration EA that included recommendations which were incorporated into the proposed action.

Concurrence of not likely to adversely affect

The Service concurs with your determination of "may affect, but not likely to adversely affect" for the proposed action on the following species: Colorado pikeminnow, humpback chub, bonytail, razorback sucker, Mexican spotted owl, bald eagle, southwestern willow flycatcher, Canada lynx, clay reed-mustard, shrubby reed-mustard, and Uinta Basin hookless cactus. The Service concurs with the conclusion of your biological assessment that the proposed action will not affect the Ute ladies'-tresses orchid. The effects of the proposed project are extreme unlikely to result in the take of any federally listed species or to adversely modify any designated critical habitat and are thus discountable if the conservation measures outlined in this memorandum are fully implemented. These conservation measures are restated in this memorandum.

The black-footed ferret in the Uinta Basin is an experimental non essential population and as such is not subject to interagency consultation under section 7 of the ESA. The mountain plover is currently proposed as threatened, until a final rule listing the species as endangered or

threatened in the Federal Register is published, this species is also not subject to interagency consultation under section 7 of the ESA. The Service does, however, approve of the conservation measures described in BLM's biological assessment for those two species (ferret and plover) and they are restated here.

This Concurrence is based upon the project proponent's (Veritas) conservation measures described in the project environmental assessment in addition to the conservation recommendations outlined in your biological assessment for this project. This concurrence is conditioned upon the inclusion of those conservation recommendations in your Decision Record for this project. We require notification and a copy of the Decision Record to complete this consultation.

Description of the Proposed Action

Veritas has proposed to conduct a two-dimensional seismic exploration along 17 individual lines totaling approximately 457 miles. The project area encompasses 3,168 square miles. The project would involve drilling, shooting, and recording underground charges along the lines. These activities would directly affect less than 0.02% of the total project area. A survey crew would identify and stake the locations on the proposed seismic lines using a combination of pickup trucks, all terrain vehicles (ATVs or buggies), and foot traffic. Veritas would drill shot-holes at intervals of approximately 330 feet along each line; however, the distance between shot-holes could vary from that interval to avoid sensitive areas or physical obstacles. Shot-holes would be a maximum of 60 ft deep and approximately 3.5-4.5 inches in diameter. Shot-holes would be drilled using three kinds of equipment, depending upon the local terrain: 1) a truck mounted conventional drill would be used in open and relatively flat terrain; 2) an ATV mounted drill would be used in rougher terrain, but terrain still accessible to wheeled vehicles (ATVs are equipped with large-diameter balloon tires to minimize disturbance to soils and vegetation); and 3) a helicopter portable drill would be used in terrain too steep or rough for access by truck or ATV mounted drills.

Veritas estimates that no more than 0.25 acre feet of water would be required for all drilling on the project. The water would be obtained from the Vernal municipal water supply or some other source determined to be non-depleting to the Upper Colorado River and transported to the drill site using a water buggy or, if the shot-hole is being drilled using helicopter portable techniques, water would be provided via helicopter.

When using truck or ATV mounted drills, a 10-foot wide corridor (1.2 acres per mile) would be used by a truck or ATV, resulting in some soil disturbance and broken/crushed vegetation. When

using helicopter portable drills the only disturbance would be to an area of up to 13 ft^2 around the shot-hole. Based on initial surveys, it is estimated that one-third of the lines would be drilled with truck mounted drills, disturbing approximately 190 acres; one-third of the lines would be drilled with ATV mounted drills, disturbing approximately 190 acres; and one-third of the lines would be drilled with helicopter portable drills, disturbing approximately 1 acre. Total estimated disturbance would be approximately 381 acres.

The following are project proponent conservation measures within the environmental assessment:

> "surveys for TEPCS (threatened, endangered, proposed, candidate, and sensitive) species would be conducted by qualified personnel funded by Veritas at the direction of the BLM on a site-specific basis depending upon known or possible occurrence of each species along each individual line and, should TEPCS species be found, avoidance would be conducted at the direction of the BLM".
>
> "no water depletion from the Colorado River Basin, avoiding flowing streams by 500 feet and, no drilling or shooting within flood plains"

The following are additional BLM recommended conservation measures, discussed in your biological assessment, to be added as part of the Decision Record and as ROW stipulations to ensure no adverse affect to Federally listed endangered and threatened species:

> For *Sclerocactus glaucus*, *Schoenocrambe argillacea* and *Glaucocarpum suffrutescens*: BLM will require avoidance of delineated suitable habitat and populations rather than simply individual plants. Seismic activities will avoid all occupied and delineated suitable habitat areas.
>
> > *Schoenocrambe argillacea* and *Glaucocarpum suffrutescens* habitat was delineated in previous surveys. These surveys will form the GIS data base defining areas to be protected. Seismic exploration activities will avoid these delineated populations.
> >
> > Potential habitat areas for *Sclerocactus glaucus* will be surveyed by trained botanists and certified by BLM. Surveys may be conducted in 2002 until November 30 or until snow covers the ground, which ever occurs first. Surveys may commence again in April in 2003. Five foot wide transects through potential habitat will be done to sight (locate) plants. Seismic exploration activities will

avoid delineated populations and occupied habitat.

For Mexican spotted owl: Avoidance of any project related activities in areas deemed to be suitable Mexican spotted owl breeding habitat from March 1 - August 31. These areas would include the approximately 10 miles of suitable habitat as previously identified in this document and in the EA.

For bald eagle:

Avoidance of winter roost areas from November 1 to March 15.

Avoidance of active nests from January 1 to August 15.

For black footed ferret:

Prohibition of seismic exploration during the reproductive season, from May 1 to July 15.

Determine safe setback distance from burrows by conducting test shots using varying charge amounts and distances to prairie dog holes. These tests would be conducted under the direction of scientists from the BLM, FWS, and UDWR.

Establishment of buffer zones around prairie dog holes that may be occupied by ferrets, test shot data will be used to determine this buffer zone and appropriate charge levels.

Ferret searches (following established protocol) would be conducted no earlier than one week before blasting to determine the locations of ferrets along the length of the seismic line in the PMZ.

For mountain plover: Avoidance of the northeast 8 miles of line UU-02 during the breeding season for mountain plover, May 1 to June 15.

Status of the Species/Critical Habitat

Colorado River Endangered Fish Species: Four federally endangered listed fish species associated with the Colorado River Basin occur or may occur within the proposed project area. These four species are the Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila*

cypha), razorback sucker (*Xyrauchen texanus*) and bonytail (*Gila elegans*). These species have experienced severe population declines. Critical habitat has been designated in the 100-year floodplain of the Green River for all four species. The White River floodplain located within the project area also is designated as critical habitat for the Colorado pikeminnow.

Mexican Spotted Owl (*Strix occidentalis lucida*): Mexican spotted owls (a listed threatened species) have been recorded (1958 and 1993 siting not verified) in the southern portion of the Book Cliffs including that portion administered by the Vernal Field Office. This habitat has been identified through the use of a 1997 Mexican spotted owl habitat model (Willey, 1997). No designated critical habitat or protected activity centers exist in the project area (UDWR, 2002). Approximately 10 miles of potential breeding habitat exists on portions of proposed seismic lines UU-3, UU-4, UU-6 and UU-7.

Bald Eagle (*Haliaeetus leucocephalus*): Bald eagles, a listed threatened species, typically occupy habitats in coastal areas near lakes, reservoirs, and rivers. Nests are usually used by the same pair for several years. No bald eagle nests are known to occur within the project area; however, one bald eagle nest may be present and active along the White River in Colorado near the northeastern end of seismic line UU-02. Bald eagles are common in portions of the project area during the winter including foraging by migrants and wintering individuals, particularly where lines UU-02, UU-03, UU-08, UU-09, UU-10, UU-13, and UU-14 cross the White River and where line UU-05 crosses the Green River. Bald eagles have been documented during winter bald eagle surveys using cottonwood trees and cliff faces along the Green River within one mile of seismic line UU-05 (BLM, Bald Eagle Winter Surveys, 1980-2002).

Southwestern Willow Flycatcher (*Empidonax traillii extimus*): The southwestern willow flycatcher (a listed endangered species) breeds in dense riparian habitats along rivers, streams, and wetlands. The vegetation is typically dominated by dense growths of willows or other shrubs and trees. Nests are usually found within 20 yards of saturated soil or water (Sogge et. al, 1997). Southwestern willow flycatchers have been documented to occur along the Green and White Rivers and Evacuation Creek (Howe, 2000). No designated critical habitat occurs within the project area.

Canada Lynx (*Lynx canadensis*): Canada lynx (a listed threatened species) inhabit the higher elevations in Utah and uses a variety of forest types, typically those associated with snowshoe hare populations. There is no documented evidence that the proposed project area currently supports a lynx population or contains any lynx habitat. However, the project area may serve as a corridor between populations in the Uinta Mountains in Utah and the Rocky Mountains in Colorado.

Clay Reed-mustard (*Schoenocrambe argillacea*): Clay reed-mustard is a listed threatened species that occurs in the project area in two general sites, Pack Mountain and the west slope of Wild Horse bench. It is estimated that a total of less than 5,200 plants occur on some 17 element occurrences (Franklin 1992). The plants occur on the upper Evacuation Creek Member of the Green River shale formations on steep slopes of 30 to 35 degrees (Franklin, 1992) below the contact point with the hard cap stone of the Uintah Formation (Franklin, 1995). Plants are found in a desert shrub community on sparsely vegetated surface bedrock, scree and fine textured generally sandy soils. The plants grow in both exposed and protected sites such as gullies, overhangs, and bases of shrubs and grasses (Franklin, 1992), at elevations of 5,000-5,900 ft. Plants bloom May to early June (Atwood, 1991).

The Pack Mountain habitat has been well surveyed and occurrences and potential habitats mapped. Populations are scattered along ridges that form the habitat. Population numbers may vary resulting from seasonal moisture differences and the plant can be obscure in all but the wettest years (Shultz, 1979). Seismic lines 5, 15 and 17 traverse known populations and suitable habitat for *Schoenocrambe argillacea*.

A review of the BLM Vernal Field Office files and consultation with FWS (England, 2002) was used to determine where habitat occurs for this species in the project area as follows:

LINE NUMBER	OCCUPIED AND SUITABLE HABITAT	POTENTIAL HABITAT NEEDING SURVEYS
5	1240 FEET on BLM	NONE
15	2200 FEET ON BLM	NONE
17	1600 FEET ON BLM	NONE

Shrubby Reed-mustard (*Glaucocarpum suffrutescens*): Shrubby reed-mustard is a listed endangered species that occurs in the Big Pack Mountain and Little Pack Mountain portions of

the project area. It is also located on four sites to the west in the Gray Knolls and Ninemile Canyon on the Evacuation Creek Member of the Green River Formation. Approximately 2854 plants occur on 19 sites and 179 acres (Franklin, 1995). The plants are found on sparsely vegetated clayey soils with white shale chips on slopes less than 30% (Shultz, 1979). Elevations range from 5100 to 6500 feet.

A review of BLM files and consultation with FWS (England, 2002) was used to determine where habitat occurs for this species in the project area. Lines 1, 4, and 15 go through population sites and suitable habitat for *Glaucocarpum suffrutescens* as follows:

LINE NUMBER	OCCUPIED AND SUITABLE HABITAT	POTENTIAL HABITAT NEEDING SURVEYS
1	750 feet on BLM	NONE
4	1200 FEET BLM	NONE
15	1500 FEET BLM	NONE

Uinta Basin Hookless Cactus (*Sclerocactus glaucus*): The Uinta Basin hookless cactus (a listed threatened species) occurs in the project area on Wild Horse Bench and in association with gravel surfaced knolls and benches along the Green and White Rivers. Populations are uncommon in the area. Plants that have been found on the northern portion of Wild Horse Bench are generally single plants. Plants found in the White River are few and scattered and are associated with some of the drainages close to the White River. The scarcity of the habitat type is the limiting factor governing the distribution of *Sclerocactus glaucus* (FWS, 1990). The short spined phase of *S. glaucus* known as *S. brevispinus* is restricted to the Myton Bench area and does not occur in the project area.

A review of BLM records and consultation FWS (England, 2002) was used to determine habitat occurrence for this species in the project area. Lines 2, 3,5, 7, 10,11 13,14,and 16 cross potential habitat for *Sclerocactus glaucus* as follows:

LINE NUMBER	OCCUPIED AND SUITABLE HABITAT	POTENTIAL HABITAT NEEDING SURVEYS
2	NONE	1000 FEET ON BLM
3	NONE	1000 FEET ON BLM
5	NONE	7.2 MILE ON BLM
7	NONE	1.8 MILES ON BLM 0.2 MILES ON PVT
10	NONE	1000 FEET ON BLM

13	NONE	1.5 MILES ON BLM 1.5 MILES ON STATE
14	NONE	1.8 MILES ON BLM
16	NONE	3.6 MILES ON BLM 4.8 MILES ON TRIBAL

Ute Ladies'-tresses (*Spiranthes diluvialis*): Ute Ladies'- tresses is a listed threatened species that occurs on the Green River in Brown's Park and along the southern flank of the Uintah Mountains on streams, canals, seeps, and wetlands. A review of known habitat locations and requirements reveals that the project area does not have suitable habitat for Ute Ladies'- tresses because streams in the area are incised and soils are too alkaline. Portions of Willow Creek and the White River were surveyed for Ute ladies'-tresses in 1991, but no populations or suitable habitats were documented (Coyner, 1991). The project design prohibits activities within 300 feet of perennial water, seeps, and streams. Based on these factors, it has been determined that there would be no impact to the Ute Ladies'-tresses or its habitat. Therefore, this species will not be analyzed further in this document.

Black-footed Ferret (*Mustela nigripes*): Portions of lines UU-02 and UU-13 are located in the Coyote Basin ferret reintroduction area that contains an experimental, non-essential population of black-footed ferrets (a listed endangered species). The 1985 Book Cliffs RMP was amended in 1999 (EA No. UT 080-1999-02) to allow for reintroduction of black-footed ferrets. Ferrets released under section 10j of the Endangered Species Act (ESA) as experimental, nonessential populations are not considered to be "endangered" but are treated as "proposed for listing" under the Act. This allows for more flexibility in management of the species and formal consultation with FWS is not required. However, BLM is still required to keep FWS and the Utah Division of Wildlife Resources informed of proposed projects in ferret habitat and seek advice on the best management practices to protect the animals.

The RMP plan amendment requires mitigation for surface and subsurface disturbance. Geophysical exploration is classified as an "ephemeral" disturbance. This means that the disturbance involved encroaches on prairie dog habitat for a period of less than six months, following which time it again becomes or can be made suitable for prairie dog use. The amendment requires that ephemeral disturbances may not occur during the A "critical period" for breeding ferrets. This restriction is for no disturbance within a 1/8 mile of the home range of a female ferret between 1 May to 15 July. A spotlighting census for ferrets in August 2002, revealed at least eight known ferrets within approximately 1/8 mile of the proposed seismic

route; four of which were females, and two of the females had young.

Mountain Plover (*Charadrius montanus*): Mountain plovers (proposed for listing as a threatened species) have been observed within one mile of seismic line UU-02. Suitable habitat also exists for this species along the north-east 8 miles of seismic line UU-02. Mountain plover habitat is known to include short-grass and shrub-steppe landscapes: dry land, cultivated farms, and prairie dog towns. Plovers usually nest on sites where vegetation is sparse or absent, due to disturbance by herbivores, including domestic livestock and prairie dogs. Usually, nest sites within the shrub- steppe are located in active prairie dog towns. They have also been located on oil well pads (FWS, Mountain Plover Survey Guidelines, 2001).

DIRECT AND INDIRECT EFFECTS AND CUMULATIVE EFFECTS

Colorado River Endangered Fish Species

Direct and Indirect Effects: Four federally listed fish species associated with the Colorado River Basin occur or may occur within the proposed project area. The following four species are the endangered Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), razorback sucker (*Xyrauchen texanus*) and bonytail (*Gila elegans*). These species have experienced severe population declines. Critical habitat has been designated in the 100-year floodplain of the Green River for all four species. The White River floodplain within the project area also is designated as critical habitat for the Colorado pikeminnow.

Cumulative Effects: Long term activities and effects in the project area include increased oil and gas development, livestock grazing, increased OHV use, increased habitat fragmentation, and drought. Increased oil and gas development and OHV use in the project area has led to an increase in the number of roads and trails, which may impact these fish species by increasing siltation in waterways. Increased oil and gas development increase the risk of contaminants reaching important habitat for these species.

Mexican Spotted Owl (*Strix occidentalis lucida*)

Direct and Indirect Effects: No designated critical habitat for the Mexican spotted owl is located in the project area. No known nesting sites and no owls have been found in recent years although a historic siting of a Mexican spotted owl is documented in the literature. The 1997 Mexican spotted owl model (Willey, 1997) identified approximately 259 miles of potential habitat along the proposed project lines. Upon further analysis, it was determined that only approximately 10 miles along the southern end of proposed lines UU-3, UU-4, UU-6 and UU-7 contains potential breeding habitat. This finding is based on an analysis of the proposed seismic lines using the criteria for nesting habitat determination as defined in the Mexican Spotted Owl Recovery Plan (1995) (UDWR Personal Communication, 2002). The remaining 249 miles did not meet the nesting habitat criteria.

Surveying, drilling, shooting and recording activities along these portions of lines during the breeding season could disrupt Mexican spotted owl breeding activities. Nest abandonment and/or loss of young could occur due to the use of helicopters, ATV's and foot travel along the lines could lead to a potential "take" situation. Loss of an individual bird would result in a loss of local population viability due to the low population number of the species. Disturbance of prey species habitats has the potential to indirectly impact Mexican spotted owl by removing or displacing prey species from the owls' home range.

Cumulative Effects: Long term activities and effects in the project area include increased oil and gas development, cattle grazing, increased OHV use, increased habitat fragmentation, and drought. Cumulative impacts would primarily result in surface disturbance or the loss of vegetation. Proliferation of ATV trails as a result of this project and other similar projects which could likely occur on private and state lands in the area and may result in additional disturbance to potential nesting habitat, making some areas unsuitable for future nesting attempts. Ongoing activities in Mexican spotted owl habitat may reduce the habitat suitability for this species by increasing disturbance levels as well as increasing habitat fragmentation due to the addition of new roads and trails.

Bald Eagle (*Haliaeetus leucocephalus*)

Direct and Indirect Effects: No bald eagle nests occur within the project area, however one bald eagle nest may be present and active along the White River in Colorado near the northeastern end of seismic line UU-02. Bald eagles would be present in the project area during the winter and would include foraging by migrants and wintering individuals. Surveying, drilling, shooting and recording activities along these portions of lines during the breeding season could disrupt bald eagle breeding activities. Nest abandonment and/or loss of young could occur due to the use of helicopters, ATV's and foot travel along the lines, leading to a potential "take" situation. Disturbance of prey species habitats has the potential to indirectly impact bald eagle by removing or displacing prey species from the eagles' home range.

Cumulative Effects: Long term activities and effects in the project area include: increased oil and gas development, cattle grazing, increased OHV use, increased habitat fragmentation, and drought. An increase in oil and gas exploration, OHV use, and other long term activities may disrupt eagle winter roost sites and lead to fewer suitable roost sites and may preclude the nesting of Bald eagles.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

Direct and Indirect Effects: Suitable habitat for Southwestern willow flycatchers exists along the Green and White Rivers and Evacuation creek. Suitable habitat also may exist in other riparian areas within the proposed project area. Surveying, drilling, shooting, and recording activities along portions of the lines in which Southwestern willow flycatchers are present would disrupt breeding activities, result in nest abandonment, nest destruction, and/or loss of chicks.

Cumulative Effects: Long term activities and effects in the project area include: increased oil and gas development, cattle grazing, increased OHV use, increased habitat fragmentation, and drought. An increase in oil and gas exploration, OHV use, cattle grazing, and other long term activities may affect Southwestern willow flycatcher nesting sites. Increased cattle grazing has

led to a degradation of riparian habitat, affecting the quality and quantity of habitat available to this species. Increased habitat fragmentation due to new roads and trails may lead to increased access in riparian areas, affecting the reproductive success of the species.

Canada Lynx (*Lynx canadensis*)

Direct and Indirect Effects: No suitable habitat exists in the proposed project area for Canada lynx, therefore no effects to this species are anticipated.

Cumulative Effects: Long term activities and effects in the project area include: increased oil and gas development, cattle grazing, increased OHV use, increased habitat fragmentation, and drought. An increase in oil and gas exploration, OHV use, and other long term activities may decrease the suitability of this habitat for the Canada lynx and prohibit colonization by this species.

Plant Species

Direct and Indirect Effects: Implementation of the proposed project would not result in additional fragmentation of any TEC plant habitat. The three species that occur in the project area are currently scattered, disjunct populations that are naturally fragmented by the geology of the area and their distinct habitat preferences. Historically, the species were more contiguous and human activities of building stone collection, grazing, and mineral extractions have degraded and fragmented the species habitat. Pollinators are probably habitat and flower generalists and common over the area as plants produce seed over a broad landscape. Three ground nesting bees were found in association with *Glaucocarpum suffrutescens* (FWS, 1994). *Sclerocactus glaucus* uses bees, flies, beetles, and ants as pollinators (FWS, 1990). It is doubtful that the work on the seismic lines would impact pollinator population. Temporary loss of some habitat to ground nesters could occur on approximately 381 acres within the actual seismic routes. There would not be any impact to TEC plant seed production since most of the habitat for plants and associated pollinators are located outside the seismic lines areas. The lines would not constitute permanent barriers.

No OHV or ATV activities would occur in *Schoenocrambe argillacea* populations or potential habitat following completion of the project due to the steepness and roughness of the terrain. In addition, helicopter methods would be used to drill the shot-holes instead of buggies, therefore, no trails would be created. Off road activities would be possible on sites for the remaining two species where buggy and truck drill rigs would be used. Portions of *Glaucocarpum suffrutescens* and *Sclerocactus glaucus* habitat would be susceptible to OHV due to the moderate slope ranges ad general lack of vegetation. *Glaucocarpum suffrutescens* habitat occurs on seismic lines 1, 4 and

15. These populations are small and travel through the site with buggies would leave tracks that could lead to travel by recreation ATVs. OHV use has been identified in the recovery plans for *Sclerocactus glaucus*(FWS, 1990) and *Glaucocarpum suffrutescens*(FWS, 1994) as a threat to the species. The crossing of habitat with ATVs in traveling for seismic activities and the associated drilling with the truck and ATV rigs could result in the loss of plants that are dormant, on unstable slopes, of small size and missed in surveys, or obscure in the spring in seedling stages, or covered in the winter.

Surveys and avoidance: Under the proposed applicant-committed environmental protection measures (2.1.5.9) "surveys for TEPCS species would be conducted by qualified personnel funded by Veritas at the direction of the BLM on a site-specific basis depending upon known or possible occurrence of each species along each individual line and, should TEPCS species be found, avoidance would be conducted at the direction of the BLM". However, avoidance of individual plants located during a given year would not adequately prevent adverse effects to the listed species since plant numbers may vary with moisture conditions of the year and impacts to the habitat would directly and indirectly affect the species. Surveys are effective for delineation of the habitat area for these species.

In dry years like 2002 plants rely on dormancy and root reserves to survive until conditions change. Survival rates of individuals would be dependent on severity and duration of the dry conditions and the kind of species involved. Shultz (1979) suggests this is a survival mechanism for *Schoenocrambe argillacea* and probably for *Glaucocarpum suffrutescens* as well. In addition, *Schoenocrambe argillacea* can be quite obscure in all but the wettest times (Shultz 1979) making surveys difficult.

In reviewing populations of the candidate species of Penstemon in the summer of 2002 for a challenge cost share agreement with BLM, Sylvia Torti of Red Butte Gardens could not find any plants of *Penstemon grahamii* on the few sites she visited. In visiting the type locality of *Penstemon scariosus* var. *albifluvis* Sylvia did not find any plants on the site. In the previous year which was dry through the summer, but had spring moisture, Dr. Torti and Robert Specht of BLM found numerous plants on the site that had produced seed. Trying to use only surveys to avoid plants on known and potential habitat of *Schoenocrambe argillacea, jGlaucocarpum suffrutescens*, and *Sclerocactus glaucus* would result in the loss of plants.

The pattern of moist and dry seasons and long periods of dry seasons may shift population locations on designated suitable habitats. Franklin (1995) found the population in the habitat for EO006 that occurs on line 15 about a quarter of a mile from the population delineation done by Sultz in 1979.

Individual *Sclerocactus glaucus* plants shrink and swell with changing seasonal moisture

conditions. Field observations showed *Sclerocactus glaucus* swelling with spring moisture in late March through April and shrinking in the fall. The old and large individuals remain above the surface, the young and smaller stature plants shrink to the surface or below and become covered with the surface pebbles and fines that are typical of the habitat, and become obscure. Seedlings and first year plants of this species are extremely hard to see. Travel over habitat or placement of drill rigs on habitat would crush and kill individual plants located on the sites.

Seed banks are probably the survival mechanisms for TEP species in the area. Shultz (1979) found seedling of *Penstemon grahamii* by digging in the shale litter on the the surface of habitat. Seedlings were found in thick groups near bases of mature plants. Field observations on the type locality of *Penstemon scariosus* var. *albifluvis* by Robert Specht in 2001 found plants and seedlings within the portions of the site with the shale surface fragments undisturbed. Livestock trails and the area adjacent to the trails where the shales were disturbed and moved off the surface were devoid of plants. *Glaucocarpum suffrutescens* also grows in open shale areas of less than 30% slopes. Surface shale provides microclimates for seedlings to become established. These sites reduce surface temperatures and retain moisture increasing survival of seedlings.

Travel over the shales on suitable habitat and the disturbance of the surface fragment cover would result in the loss of seedlings and young plants of *Glaucocarpum suffrutescens*. The effects could be short or long term due to weathering conditions and if the areas return to their original state. On the steeper slopes traveling would change the surface composition pattern of the shale surface layers and scree creating bare ground areas where habitat for seeding establishment would be decreased until weathering returned the habitat to its original condition. Compaction of soils would change the seedling and loose shale relationship for these species and remove these sites for establishment of plants until frost heaving and weathering return the site to its original state. Disturbance of these areas could be important to the species due to small habitat size. areas especially for *Penstemon grahamii* due to it's genetic isolation and inability to colonize new habitats. Shultz (1979) noted differences in the color of vegetation and corollas in *Penstemon grahamii* and attributed it to generic variation due to the isolation of the plant at different habitat locations.

Helicopter drilling on *Schoenocrambe argillacea* habitat would be in an area with an estimated population of 800-1000 individuals (Franklin, 1995). Drilling would be on steep slopes and be within the primary habitat zone below the Uintah cap rock. The older larger plants occur in protected and stable sites under the caps, while the younger occur on the unstable slopes (Shultz, 1979). Drilling on the slopes would disturb up to 15 sites in these areas. Disturbance to the stable vegetated areas could result in young plants succumbing in slides and the direct loss of an estimated 30 plants based on the loss of two plants per site.

Cumulative Effects: Long term activities and effects in the project area include historical

degradation of habitat, increased oil and gas development including construction of wells, pipelines and roads, borrow pits, livestock grazing, an increase in annual weed, especially cheatgrass, increased OHV use, building stone collection, and drought. Cumulative impacts would primarily result in surface disturbance or the loss of vegetation. Off highway use may increase in the area due to the use of seismic lines as OHV trails. This would lead to, reduction and degradation of habitat for *Sclerocactus glaucus* and *Glaucocarpum suffrutescens*. Drought over the last few years has limited plant growth and reproduction on native ranges and the same is probably true for other TECP plant species in the area, especially since these species are on xeric and low productivity sites to begin with. Years 2000 and 2001 had moist springs but dry summers. The year 2002 was dry from spring to late summer. Seed production and plant occurrences for *Glaucocarpum suffrutescens and Schoenocrambe argillacea* were low to almost none. *Sclerocactus glaucus* flowered in 2002 but at a lower occurrence than 2001. Insect levels were lower in the Book Cliffs and Myton Bench. With low seed production, potential for new plants are decreased. Loss of habitat will reduce the potential for plants to reestablish if they are lost to drought. Compaction on small habitat sites of these species would increase the likelihood of plants not becoming established. Wildlife and livestock uses in past years have been light. Observations on *a Penstemon scariosus* var. *albifluvis* site last year showed light use by livestock and moderate use on native ranges adjacent to the site. This year native range production was severely reduced, TECP plants that did come up would have been more susceptible to grazing by livestock, wild horses and wildlife, again reducing plant vigor and seed production. Plant densities on these sites are probably reduced. Coupled with low seed production, populations may be severely reduced over past numbers. If dry conditions continue, additional loss of habitat through disturbance and compaction will further reduce the populations ability to recover in size or numbers.

Building stone collection is still a major economic activity in the area including *Glaucocarpum suffrutescens and Schoenocrambe argillacea* habitat. Removal of the stone de-stabilizes habitat for *Schoenocrambe argillacea* and modifies the surface dynamics for *Glaucocarpum suffrutescens*. This has been attributed as a factor in the reduced distribution of this species. Major oil and gas production is occurring primarily in the Red Wash, Wonsits Valley, Wild horse Bench, Little Desert, and Myton Bench areas. Current activity in TESP habitat in the project area is low. Most of the area is leased and company emphasis in drilling could change. The effects over time of the information gathered by this project is not predictable. Oil and gas activities are still managed under the Book Cliffs RMP but are being re-visited with the development of a new RMP.

Maintaining known habitat without disturbance factors becomes a primary goal to protecting these species.

Black-footed ferret (*Mustela nigripes*)

Direct and Indirect Effects: Portions of seismic lines UU-02 and UU-13 transect the Primary Management Zone (PMZ) of the Coyote Basin Reintroduction Area for the black-footed ferret. Breeding activities could be disrupted and kit production decreased or forgone for the year from human disturbance, if seismic exploration occurred during the "critical" breeding period between 1 May and 15 July. In addition, adult animals may be killed or injured if blasting were to occur near prairie dog holes that ferrets may be utilizing for den habitat. Previous spotlighting surveys have determined that at least eight ferrets were located within 1/8 of a mile of the proposed line as late as the last week in August. Because of the rarity of the species, a loss of any animal or decreased reproduction for the year would be detrimental to the recovery of the species.

Cumulative effects: Long term activities and effects in the project area include increased oil and gas development, cattle grazing, increased OHV use, increased habitat fragmentation, and drought. Cumulative impacts would primarily result in surface disturbance or the loss of vegetation. OHV use may increase in the area due to the use of seismic lines as OHV trails. This would lead to increased habitat fragmentation, and possibly vehicle related mortality to Black-footed ferrets. Disturbance associated with ongoing activities, coupled with drought, may reduce the habitat suitability for this species and associated prey species.

Mountain Plover (*Charadrius montanus*)

Direct and Indirect Effects: Mountain plovers have been observed within one mile of seismic line UU-02 and suitable habitat exists for this species along the north-east 8 miles of seismic line UU-02. Surveying, drilling, shooting and recording activities along these portions of lines during the breeding season could disrupt Mountain plover breeding activities. Nest abandonment and/or loss of young could occur due to the use of helicopters, ATV's and foot travel along the lines could lead to a potential "take" situation. Loss of an individual would result in a loss of local population viability due to the low population number of the species in northeastern Utah. For analysis purposes, approximately 37,000 acres of potential mountain plover habitat (Manning and White, 2001) exists and has been inventoried and monitored for the last 10 years on Myton Bench. During this 10 year time period researchers located a high of five nests in 1998 (Lloyd et al., 2000). In all likelihood, given that five nests were found in 37,000 acres the probability of a line intersecting a nest is remote, but it is assumed that for analysis purposes it would happen and the nest would be destroyed leading to the loss of three individuals. The loss of three individuals would be a sizeable loss due to the small population size (14 young observed 1998) in the Uinta Basin (Lloyd et al., 2000).

Cumulative Effects: Long term activities and effects in the project area include increased oil and gas development, cattle grazing, increased OHV use, increased habitat fragmentation, and drought. Cumulative impacts would primarily result in surface disturbance or the loss of vegetation. OHV use may increase in the area due to the use of seismic lines as OHV trails. This

could lead to increased habitat fragmentation, reduction of suitable habitat and forage for mountain plovers, and possibly an increase in nest destruction or reproductive failure. Ongoing activities in Mountain plover habitat may reduce the habitat suitability for this species by increasing disturbance levels.

BASIS FOR CONCURRENCE OF NO EFFECT

Colorado River Fish

The applicant-committed environmental protection measures in the Veritas environmental assessment (4.5.1.1) states, in part: "no depletion of water from the Upper Colorado River would occur (see Section 2.1.5.9) and no explosives would be detonated within 500 feet of any flowing stream such as the Green River, White River, bitter Creek, and Willow Creek, and no drilling or shooting would occur in flood plains (see Section 2.1.5.7). This would ensure that no fish mortality would occur in any river or stream." The BLM concluded in the biological assessment that if these mitigation measures are fully implemented, no "take" of endangered Colorado River fish or adverse modification of their critical habitat would be anticipated. If the applicants committed mitigation measures are made conditions of approval in the Decision Record then the final determination would be May affect, but not likely to adversely affect the four Colorado River fishes or their habitat.

Based on the analysis of the proposed project using the avoidance language for TEPCS species as stated in the Veritas Environmental Assessment and BLM's conservation recommendations in the biological assessment the Service concurs with your determination of May affect - not likely adversely affect by reducing any impact to Federally listed fish species to a level of discountable effects where any impact to the Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), razorback sucker (*Xyrauchen texanus*) and bonytail (*Gila elegans*) will be extremely unlikely to occur. In addition, the proposed project will not adversely modify designated critical habitat of these species.

Mexican spotted owl

The applicant-committed environmental protection measures in the Veritas environmental assessment (2.1.5.9) states: "Surveys for TEPCS species would be conducted by qualified personnel funded by Veritas at the direction of the BLM on a site-specific basis depending upon known or possible occurrence of each along each individual line and should TEPCS species be found, avoidance would be conducted at the direction of the BLM"

BLM's recommendation within the biological assessment states: An additional mitigation measure (discussed in Chapter Four of the EA) should be included as part of the Decision Record as a condition of approval. This measure is as follows:

- Avoidance of any project related activities in areas deemed to be suitable Mexican spotted owl breeding habitat from March 1 - August 31.

These areas would include the approximately 10 miles of suitable habitat as previously identified in this document and in the EA. If this measure is fully implemented, no take of Mexican spotted owls would be anticipated. If this measure becomes a condition of approval the final determination of effect on Mexican spotted owls would be May affect - not likely to adversely affect.

Based on the analysis of the proposed project using the avoidance language for TESP species as stated in the Veritas Environmental Assessment and BLM's conservation recommendations in the biological assessment the Service concurs with your determination of May affect - not likely adversely affect by reducing any impact to Federally listed plant species to a level discountable effects where any impact to the Mexican spotted owl (*Strix occidentalis lucida*) will be extremely unlikely to occur.

Bald Eagle

The applicant-committed environmental protection measures in the Veritas environmental assessment (2.1.5.9) states: "Surveys for TEPCS species would be conducted by qualified personnel funded by Veritas at the direction of the BLM on a site-specific basis depending upon known or possible occurrence of each along each individual line and should TEPCS species be found, avoidance would be conducted at the direction of the BLM"

BLM's recommendation within your biological assessment states: Additional mitigation measures (discussed in Chapter Four of the EA) should be included as part of the Decision Record as conditions of approval. These measures include:

- Avoidance of winter roost areas from November 1 to March 15.
- Avoidance of active nests from January 1 to August 15.

If these mitigation measures are fully implemented, no "take" of Bald eagles would be anticipated. If the following mitigation measures are implemented the final determination would be May affect, but not likely to adversely affect the bald eagle or its habitat.

Based on the analysis of the proposed project using the avoidance language for TESP species as stated in the Veritas Environmental Assessment and BLM's conservation recommendations in the biological assessment the Service concurs with your determination of May affect - not likely adversely affect by reducing any impact to a level of discountable effects where any impact to the bald eagle (*Haliaeetus leucocephalus*) will be extremely unlikely to occur.

Southwestern willow flycatchers

The applicant-committed environmental protection measures in the Veritas environmental assessment of "avoiding riparian areas by 300 feet and flowing streams by 500 feet and no drilling or shooting within flood plains" would not result in adverse impacts to the flycatcher or its habitat because habitat areas would be avoided. The BLM concluded in the biological assessment that if these mitigation measures are fully implemented, no "take" of Southwestern willow flycatchers would be anticipated. If the applicants committed mitigation measures are made conditions of approval in the Decision Record then the final determination would be May affect, but not likely to adversely affect the southwestern willow flycatcher or its habitat.

Based on the analysis of the proposed project using the avoidance language for TESP species as stated in the Veritas Environmental Assessment and BLM's endorsement of these conservation recommendations in the biological assessment the Service concurs with your determination of May affect - not likely adversely affect by reducing any impact to a level of discountable effects where any impact to the Southwestern willow flycatcher (*Empidonax traillii extimus*) will be extremely unlikely to occur.

Canada lynx

The BLM concluded that the implementation of the Proposed Action would not likely affect Canada lynx, any of its habitat, or prey species because no known habitat is present within the project area. A portion of the project area may serve as a linkage between two known habitat areas but this has not yet been documented. No lynx have been spotted in the area. No "take" of Canada lynx would be expected. The final determination for implementation of the Proposed Action is May affect, but not likely to adversely affect the Canada lynx or its habitat.

Based on the analysis of the proposed project as stated in the Veritas Environmental Assessment and your analysis in the biological assessment the, Service concurs with your determination of May affect - not likely adversely affect by reducing any impact to a level of discountable effects

where any impact to the Canada lynx (*Lynx canadensis*) will be extremely unlikely to occur.

Plant species

The applicant-committed environmental protection measures in the Veritas environmental assessment (2.1.5.9) states: "Surveys for TEPCS species would be conducted by qualified personnel funded by Veritas at the direction of the BLM on a site-specific basis depending upon known or possible occurrence of each along each individual line and should TEPCS species be found, avoidance would be conducted at the direction of the BLM"

BLM's recommendation within the biological assessment states: "In addition to the proposed Applicant committed environmental protection measures for TEP species, BLM should require avoidance of delineated suitable habitat and populations rather than simply individual plants. Occupied and delineated suitable habitat areas would avoided from all seismic activities. Potential habitat areas would be surveyed for by trained botanists and certified by BLM. Surveys for *Sclerocactus glaucus* may be conducted in 2002 until November and starting in April in 2003. Five foot transects on potential habitat would be done to sight plants. Populations and suitable habitat would be delineated and avoided. Habitat may be surveyed for until the snow falls and these areas avoided. If populations of TEC plants are found, consultation with the FWS would be re-initiated. These conditions will be included in the EA as mitigation. If these recommendations become part of the Decision Record as terms of approval, then the determination for the listed plant species *Sclerocactus glaucus, Glaucocarpum suffrutescens, and Shoenocrambe argillacea.* would change to a May affect - not adversely affect.

Based on the analysis of the proposed project using the avoidance language for TEPCS species as stated in the Veritas Environmental Assessment and BLM's conservation recommendations in the biological assessment the Service concurs with your determination of May affect - not likely adversely affect by reducing any impact to Federally listed plant species to a level of discountable effects where any impact to *Sclerocactus glaucus, Glaucocarpum (=Shoenocrambe) suffrutescens, and Shoenocrambe argillacea* will be extremely unlikely to occur.

Additional Conservation Recommendations for Other Species with Status Relevant to the Endangered Species Act

The following four species are within the zone of influence of the proposed Veritas Seismic Exploration Project. The black-footed ferret population in the Uinta Basin is a introduced experimental non-essential population and as such is not subject to formal section 7 interagency consultation. The mountain plover is currently proposed as threatened and will not be subject to formal section 7 consultation until a final rule is published in the Federal Register. Graham's beard tongue (*Penstemon grahamii*) and the White River beard tongue (*Penstemon scariosus albifluvis*) are both officially designated candidate species. The Service has made a determination that these two plants warrant listing as either threatened or endangered under the provisions of

the ESA. Action towards listing, however, has been deferred. Until these two plant species are listed under the provisions of the ESA, Neither of them are subject to section 7

interagency consultation. The following are conservation measures outlined in the Veritas environmental assessment and your biological opinion. The Service endorses them and urges their implementation.

Black-footed Ferret

Prohibition of seismic exploration during the reproductive season, from May 1 to July 15.

Determine safe setback distance from burrows by conducting test shots using varying charge amounts and distances to prairie dog holes. These tests would be conducted under the direction of scientists from the BLM, FWS, and UDWR.

Establishment of buffer zones around prairie dog holes that may be occupied by ferrets, test shot data will be used to determine this buffer zone and appropriate charge levels.

Ferret searches (following established protocol) would be conducted no earlier than one week before blasting to determine the locations of ferrets along the length of the seismic line in the PMZ.

Mountain Plover

Avoidance of the northeast 8 miles of line UU-02 during the breeding season for mountain plover, May 1 to June 15.

Penstemon grahamii* and *Penstemon scariosus albifluvis

Avoidance of delineated suitable habitat and populations would be done instead of individual plants.

Potential habitat areas would be surveyed by trained botanists and certified by BLM. Occupied and suitable habitat will be delineated and avoided.

Surveys for *Penstemon grahamii* and *Penstemon scariosus* var. *albifluvis* need to be done starting in 2003 from May through September. Survey for shale habitats may be done in 2002 on the routes until snow fall, and these areas avoided.

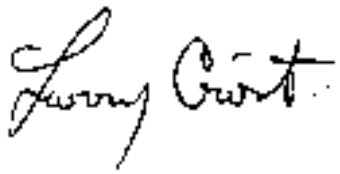
Conclusion

After reviewing the current status of, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, the Service concurs with your biological

assessment that the Veritas 2-D Seismic Exploration Project in Uintah County, Utah will not adversely affect the; Colorado pikeminnow, humpback chub, bonytail, razorback sucker, Mexican spotted owl, bald eagle, southwestern willow flycatcher, Canada lynx, clay reed-mustard, shrubby reed-mustard, and Uinta Basin hookless cactus. The Service concurs with the conclusion of your biological assessment that the Proposed Action will not affect the Ute ladies'-tresses orchid. Should additional information on listed or proposed species become available, this determination may be reconsidered.

The above comments are provided in accordance with the Endangered Species Act (87 Stat. 884, as amended: 16 U.S.C. 1531 et. seq.). Our comments regarding compliance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et. seq.) and the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 et. seq.) will be provided in later correspondence. In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

Please contact Larry England, Botanist or Laura Romin, Fish and Wildlife Biologist, of this office at (801) 975-3330, if we can be of further assistance.



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